

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ
УНІВЕРСИТЕТ ІМЕНІ СЕМЕНА КУЗНЕЦЯ**

Кафедра інформаційних систем

ПОГОДЖЕНО
Проректор з навчально-методичної роботи

Каріна ЦЕМАШКАЛО



**РОБОЧА ПРОГРАМА
ПЕРЕДДИПЛОМНОЇ ПРАКТИКИ**

рівень вищої освіти	перший (бакалаврський)
галузь знань	12 "Інформаційні технології"
спеціальність	121 Інженерія програмного забезпечення
освітньо-професійна програма	Інженерія програмного забезпечення

Завідувач кафедри інформаційних систем

Дмитро БОНДАРЕНКО

Гарант освітньо-професійної програми Інженерія програмного забезпечення

Олег ФРОЛОВ

Харків
2024

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS**

Department of Information Systems

AGREED

Vice-rector for educational and methodical work



Karina NEMASHKALO

PRE-GRADUATE PRACTICE

Program of the course

Field of knowledge **12 "Information Technology"**
Specialty **121 "Software engineering"**
Study cycle **first (bachelor)**
Study programme **"Software engineering"**

Head of information
system Department

Dmytro BONDARENKO

Head of Study Programme

Oleg FROLOV

Kharkiv
2024

PROGRAM DEVELOPERS:

PhD in Economics, Associate Professor Iryna USHAKOVA,

Lecturer Liudmyla ZNAKHUR

Ph.D., Associate professor Oleg FROLOV

The program was agreed with the Head of study program "Software Engineering"

The program was approved at a meeting of the department information systems
Protocol of the meeting of the department №1 from 22.08.2023

The program has been prolonged:

20__/20__ year Head of the Department of Information Systems

Dmytro BONDARENKO

Head of study program "Software Engineering"

Oleg FROLOV

The program has been prolonged:

20__/20__ year Head of the Department of Information Systems

Dmytro BONDARENKO

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20__/20__ year Head of the Department of Information Systems

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Head of study program "Software Engineering"

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Introduction

Software engineering is a key field in modern information technology that ensures the development and maintenance of high-quality software. Pre-diploma practice in software engineering is an important stage in the training of future specialists in this field.

The work program includes a description of internship processes and practical tasks that will help applicants use development, project management, testing, and quality assurance methodologies. As part of pre-diploma practice, applicants will have the opportunity to work with real projects, using modern tools and technologies. They will be able to improve their communication, teamwork and problem-solving skills in the software development process.

The work program of the pre -diploma internship was compiled in accordance with the educational and professional program "Software Engineering" of the first (bachelor's) level of specialty 121 "Software Engineering".

1. Characteristics, purpose, tasks and results of pre-diploma practice

1.1. Characteristics of pre-diploma practice (Table 1).

Table 1

Number of credits	Total hours	type of control	Semester	
5	150	report	8	
	Of them:			
	practice			independent work
	-			150

1.2. the purpose pre-diploma practice is the generalization, systematization, consolidation and deepening of applicants' theoretical knowledge in specialized disciplines, acquisition of skills in the analysis of information systems of the management object for the purpose of independent design and development of elements of information systems (IS) using modern information technologies, tools and CASE- means

1.3. The main tasks of pre-diploma practice include:

1. Organization of communication processes with practice managers and applicants.

2. Acquaintance of applicants with the organizational structure of the practice base, management processes, activities or projects performed at the practice base.

3. Formulation of requirements for the tasks of the diploma project (pre-diploma practice).

4. Development of skills in conducting pre-project analysis and software development.

5. Carrying out pre-project analysis of the subject area of research (diploma topics) using various tools and technologies.

6. Development of communication skills in cooperation with specialists of the practice base.

The tasks of pre-diploma practice applicants are:

collection of material on the topic of the diploma project;

analysis of the activity and organizational structure of the management object;

carrying out a pre-project analysis on the topic of the diploma project;

analysis of available analogues of the solution;

comparative analysis of found analogues;

formation of a pre-diploma practice report.

1.4. Planned competencies and learning outcomes.

The main task of undergraduate practice is to develop general and special competencies required for the future profession. After completing the practice, applicants must achieve the results in accordance with the educational and professional program (Table 2).

Table 2

Planned competencies and learning outcomes by types of practices

Special competences	General competences	Learning outcomes
SC8, SC10	GC3, GC5, GC6	LO1
SC11, SC12	–	LO3
SC1	GC2, GC3	LO9
SC1	GC2, GC3	LO10
SC2	–	LO11
SC2, SC3	–	LO12

where:

general competencies:

GC02. Ability to apply knowledge in practical situations.

GC03. Ability to communicate in the state language both orally and in writing.

GC05. Ability to learn and master modern knowledge.

GC06. Ability to search, process and analyze information from various sources.

special competencies:

SC01. Ability to identify, categorize and formulate software requirements.

SC02. Ability to participate in the design of software, including modelling (formal description) of its structure, behaviour and processes of operation.

SC03. Ability to develop architectures, modules and components of software systems.

SC08. Ability to apply fundamental and interdisciplinary knowledge to successfully solve software engineering problems.

SC10. The ability to accumulate, process, and systematize professional knowledge about creating and maintaining software and recognize the importance of life long learning.

SC11. Ability to implement phases and iterations of the life cycle of software systems and information technologies based on appropriate software development models and approaches.

SC12. Ability to carry out the system integration process, apply change management standards and procedures to maintain the integrity, overall functionality and reliability of the software.

learning outcomes:

LO01. Analyze, purpose fully search for and select information and reference resources and knowledge necessary for solving professional problems, taking into account modern achievements of science and technology.

LO03. Know the basic processes, phases, and iterations of the software lifecycle.

LO09. Know and be able to use methods and tools for collecting, formulating and analyzing software requirements.

LO10. Conduct a pre-design survey of the subject area, system analysis of the design object.

LO11. Select input data for design, guided by formal methods of requirements description and modelling.

LO12. Apply effective software design approaches in practice.

2. Content and organization of pre-diploma practice

2.1. Pre-diploma practice.

Pre-diploma practice is an important component of the educational process of applicants for special education. "Software engineering" because it allows applicants to gain practical experience in the field of computer technologies and expand their knowledge and skills.

Organization of practice includes:

1. Practice plan: a pre-diploma practice plan taking into account the tasks and purpose of the practice, time schedule and requirements.
2. Practice base: definition of a practice base where applicants will be able to gain practical experience and learn modern technologies.
3. Approval of diploma project topics: each winner conducts practice-based research within the framework of the topic of his diploma project.
4. Consultation on practice.
5. Communication with practice managers.
6. Monitoring of the practice process.
7. Evaluation of practice results.

Pre-diploma practice can be carried out in state, municipal, public, IT companies, commercial and non-commercial organizations or enterprises, higher education institutions, where it is possible to collect and study materials related to the

implementation of business processes, as well as in educational and scientific units of the university according to the direction training of applicants.

The organization of practice at all stages is aimed at ensuring the continuity and consistency of applicants' mastery of professional skills and abilities in accordance with the requirements according to the level of bachelor's training. Practice is conducted in accordance with the individual program of pre-diploma practice agreed upon by the applicant and the academic supervisor based on general approaches to its content and structure.

The appointment of supervisors is carried out by the graduation department and formalized by order of the rector. After signing the order, changes in organizational matters of the practice are not allowed. Before the start of the internship, the supervisors of the internship from the graduation department of KhNU named after S. Kuznets conducts preparatory meetings for pre-diploma practice, where applicants are introduced to the purpose and tasks of pre-diploma practice, the calendar plan for the practice, requirements for writing reports on practice, and the duties of applicants during practice. Safety instruction is given at the introductory meeting during pre-diploma practice, which is recorded in the safety instruction book.

According to the results of the meetings, applicants fill in practice diaries. In the diary, applicants provide: information about themselves, the name of the practice base, the type of practice, the period of practice, a calendar schedule with a list of scheduled work (Appendix A), certified by the signature of the supervisor from the university, the signature of the dean of the faculty, and the seal of the faculty. If necessary, the applicant is provided with a referral from the university to the practice base (Appendix B).

During pre-diploma practice, the applicant is obliged to:

- undergo training and strictly follow the rules of occupational health and safety;
 - get an assignment for pre-diploma practice;
 - to comply with the rules of internal labor regulations;
 - fully and independently perform the tasks provided for by the program and practice calendar;
 - ensure the necessary quality of the work performed;
 - regularly keep records in the practice diary about the nature of the work performed and tasks and provide it in a timely manner for control by the practice managers;
 - draw up and defend a report on the results of the internship.
- In the first week of practice, the applicant has:
- get assignments for pre-diploma practice;
 - coordinate the schedule of consultations with your supervisor at the department and familiarize yourself with the schedule of visits to this practice base by authorized teachers-consultants;
 - certify the calendar schedule with the signature of the head of the "Information Systems" department or a person authorized by him (for those who are doing practice at the department), or the head of another practice base (for those who are doing practice outside the university);
 - certify the applicant's arrival for practice with the signature and seal of the

management of the practice base;

In the last week of practice, the applicant has:

after completing the practice tasks and based on the results of the completed work, make work entries in the diary and receive feedback from the head of the department (appendix B) and the head of the practice base (appendix C);

certify with the signature and seal of the management of the practice base the withdrawal of the applicant from the practice;

create a report, the title page of which is signed by the applicant, the manager from the university and the manager from the practice base; if the base of practice is not a university, then the seal of the enterprise (organization, institution) must be placed on the signature of the head of the base of practice (Appendix D).

The applicant's individual pre-diploma practice plan must be coordinated with the work plan of the organization that is the practice base.

During the internship, applicants follow all the rules of the internal safety regulations established in the unit and at workplaces.

After the internship, applicants prepare the necessary documentation in accordance with the content of the pre-diploma internship (Table 3).

Table 3

Program of pre-diploma practice with distribution by days

No. z/p	The content of the work	Weeks of practice
1	Passing safety training	at the beginning of practice
2	Acquaintance with the object of management and its organizational management structure	1st
3	Creation of models of the organizational structure of the management object using CASE tools	1st
4	Familiarization with the functions of specific units that will be automated in the diploma project	1st
5	Analysis of business processes of the subject area of a specific management object with the implementation of CASE tools	2nd
6	Acquaintance with available analogues that implement the functions of the subject area using the resources of the " Internet " network	2nd
7	Performing a comparative analysis of found analogues and developing proposals for improving the functions of the subject area for the management object	2nd
8	Completion of the report according to DSTU	during practice

Head of practice from the department :

carries out general management and control over applicants' practice;
conducts consultations with applicants regarding the procedure for completing internships;

provides applicants with the necessary documents: the work program of the internship, individual assignments, etc.;

advises applicants on collecting and preparing materials necessary for writing a practice report;

in cooperation with the head of the practice base ensures high quality of its passage in accordance with the work program of the practice;

supervises applicants' implementation of the work program of practice and individual tasks;

participates in the work of the commission for the protection of practice reports; verifies the content of the report and its compliance with the work program of the practice;

participates in the discussion of the results of the internship.

The practice manager from the practice base performs the following functions:

organizes applicants' practice in full compliance with the regulations and practice program;

provides applicants with workplaces and creates conditions for them to receive information during the internship period for the implementation of the internship program;

ensures instruction of applicants on occupational health and safety rules;

together with the head of practice from the department provides assistance in developing individual calendar plans for practice and supervises their implementation;

provides applicants with the necessary consultations on issues that are part of the practice assignment and the diploma project, with the involvement of the organization's specialists;

carries out methodical guidance and provides assistance to applicants when performing relevant calculations;

provides applicants with the opportunity to discuss at the enterprise (in the unit) the results of systematization and analysis of initial information and solving practice tasks;

after the internship, prepares conclusions about the applicants' work with an assessment of fundamental, general professional and special training, attitude to tasks and the internship program;

compiles applicants' feedback on the assessment of their attitude to work, on applicants' compliance with labor discipline; about the level of theoretical and practical training of applicants, acquired skills and abilities, conscientiousness and initiative in work.

3. Requirements for the bases of pre-diploma practice

The requirements for the practice bases ensure the efficiency and quality of the organization of practice processes.

Consolidation of practice bases should contribute to the establishment and strengthening of long-term contacts of the university with enterprises

(organizations), as well as the development of cooperation between them for the purpose of high-quality training of specialists. The determination of practice bases should be preceded by the constant work of the department on studying the production and economic capabilities of enterprises (organizations) from the point of view of their suitability for the practice of applicants by specialty. In addition, the prospects of modern trends in the development of the IT industry, economic, social and environmental development of society should be taken into account.

Practice bases must meet the following requirements: the organization's activities must correspond to the research topic, the organization must have basic business processes for designing, developing, implementing, supporting software products, IT solutions or services; the availability of an appropriate level of technical support to ensure the intern's workplace, the use of modern information technologies; the possibility of conducting practice individually or in a group of applicants in compliance with the practice program; availability of communication with representatives of the higher education institution.

4. Individual practice tasks

Individual tasks are determined by practice managers in accordance with the practice program.

The tasks of applicants for pre-diploma practice are:

- undergo safety procedures at the control facility;
- collect material on the topic of the diploma project for project development and data for implementing project solutions;
- familiarize yourself with the object of management, its organizational structure and the structure of its individual units;
- develop models of the organizational structure of the management object using CASE tools;
- familiarize yourself with the functions of specific units that will be automated in the diploma project;
- perform an analysis of business processes of the subject area of a specific management object with the implementation of CASE tools;
- familiarize yourself with the available analogues that implement the functions of the subject area, using the resources of the "Internet" network;
- carry out a comparative analysis of found analogues and, on this basis, develop proposals for improving the business processes of the subject area for the management object based on the creation of project solutions;
- write and defend a report on pre-diploma practice.

The structure of the report on pre-diploma practice is as follows:

In **the introduction**, it is necessary to identify and formulate a business problem, justify the relevance of the project topic for solving this problem.

Main part:

1. Analysis of the subject area <NAME>

The purpose of Section 1 is a detailed study of the main aspects and characteristics of the subject area of the project, namely, the definition of the content and modeling of the subject area, a review of literary sources regarding existing solutions and analogues, positioning of the software product.

1.1. Definition of content of the subject area

Defining the content of the subject area provides context and understanding of the problem or problem to be solved. If the topic of the diploma is related to business, then this subsection provides a brief description of the areas of activity of the management object (enterprise, organization); the business problem to be solved is defined. Otherwise, the subject area is determined without reference to the enterprise.

It is necessary to determine:

development goals and objectives;

context and scope. Context is the boundaries within which processes are performed and related events occur, and the resources necessary for their appropriate interpretation; scopes are usually defined in terms of product, type of customer or industry;

connections and interactions with other subject areas. A subject area can be complex and include different elements that are related to each other;

key concepts and terms specific to this subject area. It can include many interrelated concepts, processes, subjects and objects;

changes and evolution of the subject area. The subject area may be subject to change and development over time. New technologies, research and requirements can influence the subject area, leading to its change and development.

1.2. Modeling of the subject area

Modeling of the subject area involves the creation of a system of models that simulate the structure and functioning of the studied subject area and meet the basic requirements - to be adequate to this area.

In subsection 1.2. necessary :

to determine the composition of the company's divisions and the connections between them, to develop a diagram of the company's organizational structure;

to develop a diagram of the organizational structure of the unit (units) related to the defined business processes;

determine the composition of functions included in the business process, develop a function tree diagram;

develop a business process management model and describe it (Table 4).

Table 4

Characteristics of the business process <Name>

The name of the characteristic	The value of the characteristic
The name of the business process	

Main participants*	
Input event	
Incoming messages / documents**	
Weekend event	
Outgoing messages / documents**	
Business Process Client***	

*for each participant, indicate the structural division, position, his role in the business process,

** provide a list of documents

*** process using process information

CASE tools are used to model the subject area.

In the process of modeling, it is necessary to distinguish the transactional component of the business process, which ensures the collection, accumulation and processing of quantitative data about the current state of the management object, as well as the analytical component, which provides the analysis of quantitative indicators formed into transactional components.

The analytical component of the business process should ensure the study of quantitative indicators in various sections and dimensions (by time periods, by goods, by customers, divisions, etc.).

Conducting such a multi-faceted analysis provides informational support for decision-making aimed at solving the identified problem.

1.3. Review and analysis of literary sources regarding existing solutions and analogues

In subsection 1.3. it is necessary to conduct a review of literary sources regarding existing approaches to the development of software for a correspondingly defined problem, goals and tasks that relate to business requirements and principles, certain technologies, platforms, libraries, etc. During the review, references should be made to relevant sources (for example, in the work [...] the authors conduct a systematic review; the author touches on (covers) such problems (questions, facts); the work [...] of the author concerns; the author in the work [...] draws a conclusion (summarizes, says, asserts), points out (analyzes, characterizes, reveals) shortcomings (contradictions, essence), describes, names, formulates, puts forward (hypothesis, question), makes an assumption, stops, emphasizes, asserts, proves etc. based on the results of the review, a conclusion is made regarding the use of better approaches to development.

It is necessary to choose several of the most popular analog software products designed to implement the functionality of the subject area and determine their characteristics, such as:

- development company;
- product versions;
- Operating System;
- basic functionality;
- user interface;

user assistance;
 usage price per month/year;
 availability of a free version / plan;
 etc.

The results of the analysis are given in the table (Table 5):

Table 5

Characteristics of similar software products

The name of the software product	<Product Name 1>	<Product Name 2>	
Development company			
Product versions			
Operating System			
Basic functionality			
User interface			
Help for the user			
The price of use			
Availability of free version / plan			
...			

For each of the software products, provide and briefly describe the screen forms that characterize the main options for using the product. To draw a conclusion about the possibility of using the experience of leading companies developing software products, using their solutions for the implementation of a diploma project.

1.4. Positioning of the created software (application, module, system)

Positioning is the determination of how your software (application, module, system) fits into the IT market, and how you provide unique value to the target audience. Positioning defines how your software product differs from the competition and why your customers need it, so it's one of the most important steps to success.

The positioning contains a brief description of the following characteristics:
 business benefits,
 problem definition,
 determination of the position of the product being created.

1.4.1. Business benefits

Business benefits are a summary of the benefits achieved by the project:

relevance, importance, significance, demand for the product being created today;

purpose, that is, how the product being developed will satisfy the needs of the main users and other interested parties and how it will be implemented.

1.4.2. Problem definition

When defining the problem - a summary of the problem that is solved by the project is given. To define the problem, use the following format (Table 6).

Table 6

Problem definition

Problem	<Description of the problem>
touches	<Stakeholders affected by the problem>
Its consequence is	<What is the impact of the problem>
Successful solution	<List of some key benefits of a successful solution>

1.4.3. Definition of position

When defining the position of the product being created, the unique position in the market that the software product intends to fill is described at the highest level. The definition of the position is described in the following format (Table 7).

Table 7

Defining the position of the software product

For	<target customer>
Which	<determination of needs and opportunities>
<Product name>	this is <software product category>
Which	<definition of the key advantage (the reason that prompts to purchase / use the product)>
Unlike	<main competitive alternative>
Our product	<definition of the main difference>

In **the conclusions**, it is necessary to determine the shortcomings and problems of the business that should be solved, possible ways to solve these problems.

5. Requirements for the pre-diploma practice report

The content and total number of pages are given in the table. 8.

An example of a structure report on pre-diploma practice

Section of the report	Number of pages
Title page	1
Content	1
Introduction	1
1. Analysis of the subject area <NAME>	5
1.1. Definition of content of the subject area	
1.2. Modeling of the subject area	5
1.3. Review and analysis of literary sources regarding existing solutions and analogues	5
1.4. Positioning of the created software (application, module, system)	3
1.4.1. Business benefits	
1.4.2. Problem definition	
1.4.3. Definition of position	
Conclusions	1
references	2
Appendices	

The main volume of the report should occupy 20-25 pages.

6. Summary of pre-diploma practice

The report must be drawn up and completed at the enterprise (organization), checked by the head of practice from the enterprise and, together with the practice diary, submitted to the department by the set deadline. After submitting the specified materials, the head of the department decides on the admission of the applicant to the defense of the report.

During the defense of the practice report, it is necessary to: show knowledge of the subject area of the research topic, methodologies for the development of information systems and software; demonstrate the results of practice.

An applicant who did not complete the practice program and received a negative feedback on the work and an unsatisfactory grade during the defense will be dismissed from the university. Practice materials submitted to the department will not be returned to applicants. The report on practice is defended by the applicant (with differentiated assessment) in the commission appointed by the head of the department. The commission consists of those responsible for conducting practice from the department of information systems and guarantors of the program.

The results of practice are discussed at department meetings: practice leaders report on the results of practice by applicants, provide suggestions for improving the organization of practice, diversifying the means of conducting it, using modern methods, best practices, and cooperation with practice bases.

7. Criteria for evaluating the results of pre-diploma practice

The results of the pre-diploma practice are evaluated according to the 100-point system for evaluating the results of studies adopted at the university.

The final number of points received by the applicant of higher education based on the results of the internship takes into account:

- manager's feedback from the practice base;
- feedback from the head of the department;
- presentation of the results of the internship by the applicant of higher education during the defense of the report;
- answers to questions.

Evaluation criteria of the practice report.

90-100 points if his report shows a deep understanding of the theoretical material, basic skills have been developed and mastered at a high level; presentation of the material is logically consistent, evidential, conclusions and generalizations are accurate; managers' feedback about the applicant's internship is high and positive; the reporting documentation on the completion of the practice is drawn up in accordance with the established requirements at the appropriate level.

74-89 points if his report during the defense meets the above-mentioned criteria, but the material is not sufficiently systematized, individual skills are formed at an insufficiently high level, there are some inaccuracies in the conclusions and generalizations, the answers to the questions of the commission members are generally correct; the supervisors' feedback regarding the applicant's internship is positive, with minor comments regarding the content and design of the pre-diploma internship materials.

60-73 points if his report demonstrates a general understanding of the main tasks of the practice program; there are significant deficiencies in theoretical knowledge; the basic skills and abilities in the applicant's work are insufficiently formed, conclusions and generalizations are weakly argued; Managers' feedback on internships is generally positive with significant comments, there are significant shortcomings in the documentation of internships.

1 – 59 points a applicant gains if he does not have theoretical knowledge; did not complete all pre-diploma practice tasks; cannot answer the questions of commission members; managers' feedback about internships is negative; there is documentation of the internship, but it is not formalized in accordance with the requirements.

A applicant should be considered certified if the grade obtained as a result of the defense equals or exceeds 60 points.

8. Recommended literature

1. ДСТУ 3582:2013. Бібліографічний опис. Скорочення слів і словосполучень українською мовою. Загальні вимоги та правила. – Київ : Мінекономрозвитку України, 2014. – 15 с.

2. ДСТУ 8302:2015. Інформація та документація. Бібліографічне посилання. Загальні положення та правила складання. – Київ : ДП "УкрНДНЦ", 2016. – 17 с.

3. ДСТУ 3008-15. Інформація та документація. Звіти у сфері науки і техніки. Структура та правила оформлювання. – Київ : ДП "УкрНДНЦ", 2016. – 31 с.

4. ДСТУ 1.5:2015. Національна стандартизація. Правила розроблення, викладання та оформлення нормативних документів. – Київ : ДП "УкрНДНЦ", 2015. – 65 с.

5. Методичні рекомендації до оформлення звітів, курсових проєктів та дипломних робіт (проєктів) для студентів спеціальностей 121 "Інженерія програмного забезпечення", 122 "Комп'ютерні науки", 126 "Інформаційні системи і технології" / уклад. І. О. Ушакова, Г. О. Плеханова, О. М. Беседовський. – Харків : ХНЕУ ім. С. Кузнеця, 2021. – 46 с.

Diary of pre-diploma practice**Practice diary**

Applicant(s)	
Faculty	<i>Information technologies</i>
Department	<i>Information systems</i>
Study cycle	<i>first (bachelor) level</i>
Specialty	<i>121 "Software engineering"</i>
Study program	<i>"Software engineering"</i>
year	group

Fig. A.1. An example of filling out the first page of a diary from pre-diploma practice

2. Calendar schedule of practice

No. z/p	Titles of works	Weeks of practice															Perform ance marks	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	18	
1	Passing safety training																	
2	Acquaintance with the object of management and its organizational management structure																	
3	Creation of models of the organizational structure of the management object using CASE tools																	
4	Familiarization with the functions of specific units that will be automated in the diploma project																	
5	Analysis of business processes of the subject area of a specific management object with the implementation of CASE tools																	
6	Acquaintance with available analogues that implement the functions of the subject area using the resources of the Internet network																	
7	Performing a comparative analysis of found analogues and developing proposals for improving the functions of the subject area for the management object																	
8	Completion of the report according to DSTU																	

Fig. A.2. An example of filling in the fourth page of the diary from pre-diploma practice

Guidance on practice

(name of practice base)

(name of the head of the practice base)

(address of practice base)

DIRECTIONS FOR PRACTICE /is the basis for enrollment in practice/

According to the agreement dated " ___ " _____ 20 __ year No. _____ , which was concluded with

(name of practice base)

We send a applicant of the ___ course of the Faculty of Information Technologies _____ to practice,

Full name

who studies in the specialty 121 "Software engineering"

(code)

(title)

for pre-diploma practice.

Practice periods from " ___ " _____ 20 __ year to " ___ " _____ 20 __ year.

Head of Department
of Information Systems

Deputy head
(vice-rector for educational and methodical work)

The supervisor feedback from the university about the pre-diploma practice

The feedback from the practice supervisor from the university must include the following:

the compliance of the assigned tasks with the set deadlines of the calendar schedule is indicated;

the degree of completeness of solving the issues considered in the work is emphasized;

attention is drawn to the scope and quality of the work performed by the applicant;

attention is paid to the timeliness and correctness of keeping a practice diary;

the obligation to attend consultations conducted by the manager is indicated;

reviews of specialists from the practice base, which are provided to the manager during a visit to the practice base, are taken into account.

Feedback from the internship supervisor from the enterprise (organization)

The following must be stated in the feedback of the practice manager from the enterprise:

completeness of the applicant's completion of the pre-diploma internship program;

the quality of the applicant's writing of the internship report, its compliance with established requirements and the realities of the internship base;

the level of preparation of the intern for professional activity in terms of theoretical knowledge and practical skills;

the applicant's attitude to work, his organization and discipline;

the practical significance of the intern's suggestions, set out in the report, regarding the improvement of certain aspects of the tasks being solved, etc.;

the ability to work in a team, the level of communication, public attitude and other personal traits that appeared during practice.

Cover sheet from pre-diploma practice

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS**

FACULTY OF INFORMATION TECHNOLOGIES
(faculty name)
DEPARTMENT OF INFORMATION SYSTEMS
(name of the department)

REPORT

PRE-DIPLOMA PRACTICE

<p>A supervisor from the internship base:</p> <p>_____</p> <p align="center">(position, department, name and initials)</p> <p>_____</p> <p>(signature)</p>	<p>Applicant(s) year _____</p> <p>Group _____</p> <p>first (bachelor) level _____</p> <p>specialty 121 "Software engineering" _____</p> <p>study program "Software Engineering" _____</p> <p>_____</p> <p align="center">(name and initials)</p>
<p>A supervisor from a university:</p> <p>_____</p> <p align="center">(position, academic title, scientific degree, name and initials)</p> <p>_____</p> <p>(signature)</p>	<p>Score including defence _____</p> <p>National scale _____ Evaluation: ECTS _____</p> <p>Commission members:</p> <p>_____</p> <p align="center">(signature) (name and initials)</p> <p>_____</p> <p align="center">(signature) (name and initials)</p> <p>_____</p> <p align="center">(signature) (name and initials)</p>

Kharkiv, 20__